

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

Claim 1 (currently amended): For heating operations in semiconductor manufacturing equipment, a ceramic susceptor comprising:

a ceramic substrate defining a wafer-support side and being processed so that when the susceptor is not heating, ~~along the susceptor thickness the difference between a maximum outer diameter and a minimum outer diameter in an arbitrary plane is 0.8% or less of the average outer diameter along the susceptor wafer-support side~~ an outer-diameter fluctuation parameter D_p , defined as $D_p = (D_{max} - D_{min})/D_{ave}$, is 0.8% or less, wherein D_{ave} is the average outer diameter of said substrate wafer-support side, D_{max} , the maximum outer diameter along the thickness in an arbitrary plane, and D_{min} , the minimum outer diameter along the thickness in the arbitrary plane; and

a resistive heating element provided either on a surface of or inside said ceramic substrate.

Claim 2 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 1, wherein the ceramic substrate is made of at least one ceramic selected from aluminum nitride, silicon nitride, aluminum oxynitride, and silicon carbide.

Claim 3 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 1, wherein the resistive heating element is made from at least one metal selected from tungsten, molybdenum, platinum, palladium, silver, nickel, and chrome.

Claim 4 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 1, wherein a plasma electrode is further disposed on a surface of or inside the ceramic substrate.

Claim 5 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 2, wherein the resistive heating element is made from at least one metal selected from tungsten, molybdenum, platinum, palladium, silver, nickel, and chrome.

Claim 6 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 2, wherein a plasma electrode is further disposed on a surface of or inside the ceramic substrate.

Claim 7 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 3, wherein a plasma electrode is further disposed on a surface of or inside the ceramic substrate.

Claim 8 (original): A ceramic susceptor for semiconductor manufacturing equipment as set forth in claim 5, wherein a plasma electrode is further disposed on a surface of or inside the ceramic substrate.

Claim 9 (canceled)

Claim 10 (canceled)

Claim 11 (currently amended): A ceramic susceptor as set forth in claim [[9]] 1, wherein ~~the difference between the maximum and minimum outer diameters D_p is less than 0.3% percent of the average outer diameter of the substrate.~~

Claim 12 (currently amended): A ceramic susceptor as set forth in claim [[9]] 1, ~~wherein: a the thermal conductivity of the substrate [[is]] being greater than 100 W/mK; [[and]] wherein the difference between the maximum and minimum outer diameters being less than 0.8 percent of the average outer diameter of the substrate results a the temperature uniformity of [[a]] the wafer-support side carrying surface of the substrate ~~being~~ is within $\pm 0.5\%$ percent.~~

Claim 13 (currently amended): A ceramic susceptor as set forth in claim [[9]] 1, ~~wherein: a the thermal conductivity of the substrate [[is]] being in a range from 10 to 100 W/mK; [[and]] wherein the difference between the maximum and minimum outer diameters being less than 0.8 percent of the average outer diameter of the substrate results a the temperature uniformity of [[a]] the wafer-support side carrying surface of the substrate ~~being~~ is within 1% percent.~~